

## 6354.0 - Job Vacancies, Australia, Aug 2011

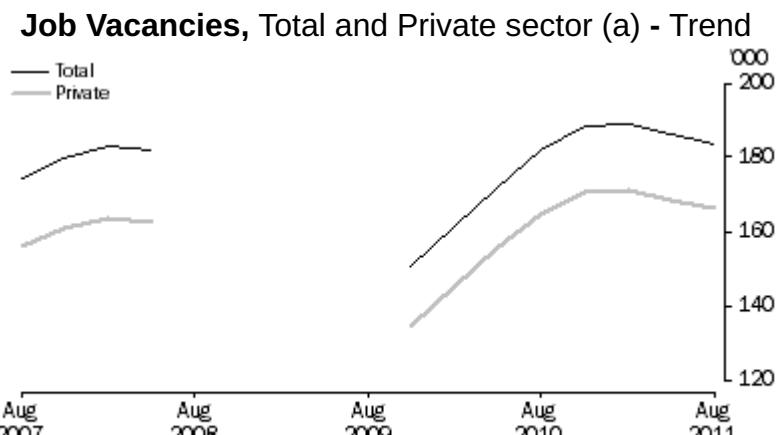
Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 29/09/2011

## Summary

### Main Features

#### AUGUST KEY FIGURES

	Aug 2011 '000	May 2011 to Aug 2011 % change	Aug 2010 to Aug 2011 % change
Trend Estimates			
Private sector	166.4	-1.3	1.0
Public sector	17.4	-1.5	1.5
Private and public sectors	183.7	-1.3	1.1



(a) Note: Survey was suspended from August 2008 to August 2009 inclusive.

### AUGUST KEY POINTS

#### TREND ESTIMATES

- Total job vacancies in August 2011 were 183,700, a decrease of 1.3% from May 2011.
- The number of job vacancies in the private sector was 166,400 in August 2011, a decrease of 1.3% from May 2011.
- The number of job vacancies in the public sector was 17,400 in August 2011, a decrease of 1.5% from May 2011.

## NOTES

### FORTHCOMING ISSUES

ISSUE (QUARTER)	Release Date
November 2011	11 January 2012
February 2012	29 March 2012

### INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Rowan Hethey on Perth (08) 9360 5115.

## Tables

### TABLES

#### 1 Job Vacancies, States and territories

	NSW	Vic.	Qld	SA	Original WA	Tas.	NT	ACT	Seasonally Adjusted Australia	Trend Australia	Trend Australia
<b>Job Vacancies ('000)</b>											
2010											
May	47.5	36.8	28.5	14.3	27.0	1.7	4.1	4.7	164.7	164.8	172.0
August	52.9	40.2	33.4	13.3	28.4	2.6	4.3	6.2	181.4	181.8	181.8
November	50.1	46.0	37.4	16.6	30.3	*2.6	3.9	6.8	193.7	193.2	188.3
2011											
February	49.2	47.7	38.3	10.7	31.5	2.3	3.8	6.2	189.9	189.9	188.9
May	47.3	40.8	41.6	10.4	28.0	2.3	4.2	6.4	181.0	181.2	186.2
August	47.1	41.9	44.6	8.9	32.8	2.3	3.1	6.0	186.7	187.1	183.7
<b>CHANGE FROM PREVIOUS QUARTER (%)</b>											
2010											
May	-5.6	10.6	-9.9	7.9	-2.1	-40.1	-6.6	-17.8	-2.6	-2.5	6.6
August	11.4	9.1	17.3	-7.1	5.2	59.5	6.3	30.9	10.2	10.3	5.7
November	-5.3	14.3	11.9	24.5	6.8	-1.4	-10.5	10.0	6.8	6.3	3.6
2011											
February	-1.8	3.8	2.4	-35.1	4.0	-12.1	-1.2	-9.3	-2.0	-1.7	0.4
May	-4.0	-14.6	8.6	-3.4	-11.0	-1.0	10.3	4.0	-4.7	-4.5	-1.5
August	-0.4	2.8	7.2	-14.6	17.1	0.6	-25.7	-6.2	3.2	3.2	-1.3
<b>CHANGE FROM CORRESPONDING QUARTER OF PREVIOUS YEAR (%)</b>											
2011											
August	-11.0	4.2	33.3	-33.4	15.7	-13.7	-27.6	-2.7	2.9	2.9	1.1

\* estimate has a relative standard error of 25% to 50% and should be used with caution

## 2 Job Vacancies, Private Sector - States and territories

	NSW	Vic.	Qld	Original				Seasonally Adjusted			Trend					
				SA	WA	Tas.	NT	ACT	Australia	Australia						
<b>VACANCIES ('000)</b>																
<b>CHANGE FROM PREVIOUS QUARTER (%)</b>																
2010																
May	43.8	34.1	25.4	13.6	25.3	1.2	2.9	*3.4	149.6	149.6	155.5					
August	49.1	37.1	28.8	12.3	26.5	2.0	3.1	*4.9	163.8	163.8	164.6					
November	45.6	42.4	33.1	15.6	28.5	*2.2	2.4	5.5	175.4	175.4	170.5					
2011																
February	45.1	44.1	34.3	9.7	29.9	1.8	2.6	4.5	172.0	172.0	171.0					
May	43.8	37.3	37.3	9.4	26.0	1.9	3.1	4.6	163.3	163.3	168.5					
August	44.0	39.2	39.9	8.0	30.5	2.0	2.3	4.2	170.0	170.0	166.4					
2010																
May	-5.1	13.2	-10.1	9.3	-0.9	-49.0	-2.8	-24.0	-1.7	-1.7	7.1					
August	12.0	8.8	13.4	-8.9	4.7	74.5	5.4	44.7	9.5	9.5	5.9					
November	-7.0	14.3	15.1	26.5	7.4	10.2	-21.0	11.5	7.1	7.1	3.5					
2011																
February	-1.1	3.9	3.5	-38.2	5.1	-20.1	8.9	-17.3	-1.9	-1.9	0.3					
May	-3.0	-15.4	8.8	-3.1	-13.2	8.8	17.5	0.9	-5.1	-5.1	-1.4					
August	0.4	5.0	7.0	-14.8	17.5	1.8	-27.3	-8.2	4.1	4.1	-1.3					
2011																
August	-10.4	5.6	38.7	-35.4	15.1	-2.5	-26.6	-14.6	3.8	3.8	1.0					

\* estimate has a relative standard error of 25% to 50% and should be used with caution

## 3 Job Vacancies, Public sector - States and territories

	NSW	Vic.	Qld	Original				Seasonally Adjusted			Trend					
				SA	WA	Tas.	NT	ACT	Australia	Australia						
<b>VACANCIES ('000)</b>																
<b>CHANGE FROM PREVIOUS QUARTER (%)</b>																
2010																
May	3.7	2.7	3.1	0.8	1.7	0.5	1.2	1.3	15.0	15.2	16.6					
August	3.9	3.1	4.6	1.0	1.9	0.6	1.3	1.3	17.6	18.0	17.1					
November	4.5	3.5	4.3	0.9	1.9	0.4	1.5	1.3	18.4	17.8	17.8					
2011																
February	4.1	*3.6	4.0	1.1	1.6	0.5	1.2	1.6	17.8	17.8	17.9					
May	3.5	3.4	4.3	1.0	2.1	0.3	1.1	1.9	17.7	17.9	17.6					
August	3.1	2.7	4.6	0.9	2.3	0.3	0.9	1.8	16.8	17.1	17.4					
2010																
May	-10.3	-14.8	-8.4	-11.3	-17.3	-1.0	-14.7	3.6	-10.7	-9.8	2.1					
August	3.4	13.8	48.9	23.8	13.9	25.3	8.3	-4.4	17.4	18.2	3.3					
November	17.0	14.5	-7.5	-1.3	-1.3	-38.3	15.1	4.2	4.1	-0.8	4.0					
2011																
February	-8.9	2.6	-6.4	14.7	-13.6	33.5	-18.1	23.4	-2.8	0.0	0.7					
May	-14.9	-5.1	6.2	-5.7	29.2	-34.0	-5.4	12.4	-1.0	0.5	-1.6					
August	-10.1	-21.2	8.4	-13.6	11.9	-6.3	-21.3	-1.2	-5.1	-4.4	-1.5					

**CHANGE FROM CORRESPONDING QUARTER OF PREVIOUS YEAR (%)**

2011	August	-18.5	-12.1	-0.3	-7.7	23.3	-49.1	-29.9	42.9	-5.0	-4.7	1.5
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\* estimate has a relative standard error of 25% to 50% and should be used with caution

**4 Job Vacancies, Industry - Original**

	2010			2011		
	May '000	August '000	November '000	February '000	May '000	August '000
Mining	6.2	7.1	7.7	8.1	9.5	9.9
Manufacturing	11.2	14.0	12.7	12.1	10.7	10.4
Electricity, gas, water and waste services	0.6	0.8	0.9	1.2	1.0	1.1
Construction	13.1	13.5	12.0	20.1	19.4	23.9
Wholesale trade	12.4	*9.7	9.6	12.1	*12.8	14.6
Retail trade	16.3	16.1	20.5	9.3	11.0	13.0
Accommodation and food services	7.7	13.7	17.5	15.3	11.9	10.3
Transport, postal and warehousing	*8.4	*6.7	*9.5	*7.6	*5.5	*6.9
Information media and telecommunications	1.8	2.1	1.9	2.1	2.7	2.6
Financial and insurance services	11.5	11.9	8.1	11.2	8.6	8.4
Rental, hiring and real estate services	*3.2	3.2	*4.5	3.7	*3.2	*2.7
Professional, scientific and technical services	14.2	15.8	18.6	24.0	25.0	21.8
Administrative and support services	23.2	27.7	31.8	26.0	24.0	25.1
Public administration and safety	8.8	9.5	8.8	9.0	10.3	9.6
Education and training	*4.2	3.2	3.7	5.1	3.0	4.0
Health care and social assistance	14.6	19.7	16.7	16.4	16.6	15.3
Arts and recreation services	*1.9	2.1	*3.2	*1.9	1.5	1.7
Other services	*5.4	*4.7	*5.9	*4.8	*4.5	*5.3

\* estimate has a relative standard error of 25% to 50% and should be used with caution

## About this Release

Contains estimates of the number of job vacancies with state and territory and industry dissections.

## History of Changes

**This document was added or updated on 28/10/2011.**

28/10/11 Correction to reference to Forthcoming Issues (quarter) from December 2011 to November 2011.

# Explanatory Notes

## Explanatory Notes

### EXPLANATORY NOTES

#### INTRODUCTION

**1** This publication contains quarterly estimates of job vacancies based on information obtained from the quarterly Job Vacancies Survey (JVS).

**2** JVS was suspended following the May 2008 survey and was reinstated for the November 2009 survey.

#### GAP IN SERIES

**3** As a result of JVS being suspended, there is a gap in all series: original, seasonally adjusted and trend, for five periods between August 2008 and August 2009 inclusive. The ABS cannot produce reliable estimates by collecting this missing data retrospectively, and has not been able to fill the gap using other data sources. However modelled data for the gap period have been used in the production of trend time series data (see paragraphs 26 to 29 for further details).

#### CONCEPTS, SOURCES AND METHODS

**4** Descriptions of the underlying concepts of Australia's job vacancies statistics, and the sources and methods used in compiling these estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001).

#### SCOPE AND COVERAGE

**5** The survey covers all employing organisations in Australia (public and private sectors), except:

- enterprises primarily engaged in agriculture, forestry and fishing;
- private households employing staff;
- foreign embassies, consulates, etc.

**6** All job vacancies of organisations covered in the survey are in scope, except those:

- in the Australian permanent defence forces;
- located outside Australia.

#### SURVEY METHODOLOGY AND DESIGN

**7** The Job Vacancies Survey uses a sample survey methodology and collects information

via telephone interviews. Approximately 5,000 employers, selected from the ABS Business Register, are included in the survey.

**8** The statistical unit for the survey comprises all the activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit (TAU). Each statistical unit is classified to an industry which reflects the predominant activity of the business. The statistical units are stratified by state, industry division and employment size, and within each stratum, statistical units are selected with equal probability.

**9** The sample for JVS, like most Australian Bureau of Statistics business surveys, is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's Pay As You Go Withholding scheme. The population is updated quarterly to take account of new businesses, businesses that have ceased employing, changes in industry and employment levels and other general business changes.

## **STATISTICAL CHANGES IMPLEMENTED IN NOVEMBER 2009**

**10** A sample redesign of JVS was undertaken to incorporate the new ANZSIC 2006 industry classification as the industry structure of ANZSIC 2006 is different to that of ANZSIC 1993. The ABS has also implemented some other statistical changes to improve survey frames at the same time as surveys adopted ANZSIC 2006. Employment benchmarks on the business survey frame have been updated to reflect more up-to-date information for use in stratification and estimation. There have been some changes to the Standard Institutional Sector Classification (SISCA), Public/Private and level of Government classifications and invalid industry and SISCA codes have been corrected for the ANZSIC 2006 frame.

**11** The sample redesign, classification and the statistical changes will impact on:

- the population of businesses included;
- the way these businesses are grouped together for sampling purposes;
- the sample selected;
- the weighting of individual units;
- the industries used to present the statistics.

**12** The JVS sample was redesigned to accommodate and exploit all of these changes. Because of the improved groupings of businesses for sampling purposes under ANZSIC 2006, the sample size has fallen from around 5,200 to around 5,000 businesses, with no loss to survey accuracy.

## **IMPACT OF STATISTICAL CHANGES ON JVS ESTIMATES**

**13** The sample redesign and survey frame changes introduced in November 2009 are likely to have resulted in a shift in the level of the series from ANZSIC 1993 based estimates in May 2008, to ANZSIC 2006 based estimates in November 2009. Normally the ABS can provide a measure of the impact of a sample redesign by running a parallel sample on both bases for one or more cycles. However, due to the suspension of the JVS from August 2008 to August 2009 inclusive, any impact resulting from the sample redesign and survey frame changes can not be measured. Therefore caution should be used when comparing estimates from November 2009 onwards with estimates for May 2008 and previous periods.

## STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

**14** The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses (and other organisations, including government departments), and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS. The units model allocates businesses to one of two sub-populations, as follows:

### ATO Maintained Population

**15** Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN), and are then included on the ATO Australian Business Register. Most of these businesses have simple structures, in which case the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit is used for these businesses as the statistical unit for all economic collections.

### ABS Maintained Population

**16** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own structure through direct contact with each business. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses and the statistical units model described below is used for these businesses.

**17** Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the **Corporations Legislation Amendment Act 1991**), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.

**18** Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).

**19** Type of Activity Unit (TAU): The TAU comprises one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry sub-division (and the TAU is classified to the relevant sub-division of ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry sub-division.

## INDUSTRY CLASSIFICATION

**20** From November 2009, industry statistics presented are on the basis of **Australian and New Zealand Standard Industrial Classification (ANZSIC)**, 2006 edition. This edition replaces the 1993 edition which has been in use since 1994. The 2006 edition of ANZSIC

was developed to provide a more contemporary industrial classification system taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

**21** Industry data up to May 2008 are only available on an ANSIC 1993 basis.

**22** For more information on the new industry classification, refer to **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006** (cat. no. 1292.0).

## **SEASONAL ADJUSTMENT**

**23** Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. This means that quarter-to-quarter movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.

**24** Seasonal adjustments factors for November 2009 onwards are computed using the ABS standard method of concurrent adjustment. For the five periods August 2008 to August 2009 inclusive, where survey estimates are not available, modelled data have been used in this adjustment, which follows the same seasonal pattern observed in 2007/08.

**25** In the private sector estimates, seasonality has weakened in recent years to the extent that the end of the series shows no seasonality. As a result, the published seasonally adjusted estimates for the private sector for February and May 2008 and from November 2009 onwards are the same as the corresponding original estimates.

## **TREND ESTIMATES**

**26** Seasonally adjusted estimates can be smoothed to reduce the impact of irregular or non-seasonal influences. Smoothed seasonally adjusted series are called trend estimates.

**27** The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the data, and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

**28** Due to the suspension of JVS in 2008/2009, it was not possible to produce trend estimates for the first three periods following the reinstatement of the survey in November 2009. The trend series has been reintroduced from the August 2010 release, with trend data available from November 2009 onwards.

**29** Modelled data, at the Australia by sector level only, have been used in the calculation of the trend estimates for the three cycles either side of the gap period (see paragraph 3) and mainly impact the May 2008 and November 2009 trend estimates. The modelled data, which is for the gap period from August 2008 to August 2009 inclusive, are not part of the JVS series and are not available for release under cat. no. 6354.0.

## **RELIABILITY OF ESTIMATES**

**30** Estimates are subject to sampling and non-sampling errors. For information on the

reliability of estimates see the Technical Note.

## RELATED PUBLICATIONS

**31** Users may also wish to refer to the following publications:

- **Australian Labour Market Statistics** (cat. no. 6105.0) - issued quarterly;
- **Average Weekly Earnings, Australia** (cat. no. 6302.0) - issued quarterly;
- **Employee Earnings and Hours, Australia** (cat. no. 6306.0) - issued biennially;
- **Labour Force, Australia** (cat. no. 6202.0) - issued monthly;
- **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001); and
- **Employment and Earnings, Public Sector, Australia** (cat. no. 6248.0.55.002) - issued annually.

## ROUNDING

**32** Estimates have been rounded and discrepancies may occur between sums of the component items and totals. Percentage changes are calculated on the actual values and may differ from calculations based on rounded estimates.

# Glossary

## GLOSSARY

### Data type

Job vacancy estimates are a stock data type, as the number of job vacancies is measured at a point in time.

### Industry

Industry is classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006** (cat. no. 1292.0).

### Job vacancy

A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action had been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation.

Estimates of job vacancies exclude:

- jobs not available for immediate filling on the survey reference date;
- jobs for which no recruitment action has been taken;
- jobs which became vacant on the survey date and were filled on the same day;
- jobs of less than one day's duration;

- jobs only available to be filled by internal applicants within an organisation;
- jobs to be filled by employees returning from paid or unpaid leave or after industrial disputes;
- vacancies for work to be carried out by contractors;
- jobs for which a person has been appointed but has not yet commenced duty.

## Reference date

The reference date for the survey is the third Friday of the middle month of the calendar quarter. The reference date for the current survey is 19 August 2011.

## Sector

Public sector comprises local government authorities and all government departments and agencies created by, or reporting to the Commonwealth or State/Territory Parliaments. The private sector comprises all organisations not classified as public sector.

## Abbreviations

### ABBREVIATIONS

ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
JVS	Job Vacancies Survey
PAYGW	pay-as-you-go withholding
TAU	type of activity unit

## Quality Declaration - Summary

### QUALITY DECLARATION - SUMMARY

### INSTITUTIONAL ENVIRONMENT

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

### RELEVANCE

The Job Vacancies Survey (JVS) produces quarterly estimates of job vacancies based on information obtained from a sample of employers. A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action has been taken. Job vacancies data are used as a leading indicator of employment growth, in

monitoring of the Australian economy, and for formulating economic policy.

Job vacancies data are available by state/territory, industry and sector. Seasonally adjusted and trend estimates are produced for Australia by sector series.

## **TIMELINESS**

The JVS reference date is the third Friday of the middle month of the quarter, i.e. February, May, August and November. Job vacancies data relate to the number of vacancies which exist on the actual reference date only, and not for a monthly or quarterly period.

Job vacancy estimates are released six weeks after the reference date.

## **ACCURACY**

Information for the JVS is collected by telephone from approximately 5,000 employers. The employer sample selected is stratified by state, sector, industry division and employment size to ensure adequate state, sector and industry representation. A minimum response rate of 95% is achieved for the survey as a whole and for each state, sector and industry.

There are two principal sources of error in surveys, sampling error and non-sampling error. Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise non-sampling error by the careful design and testing of questionnaires, detailed checking of the reported data and direct follow up with providers where significant errors are detected.

Sampling error occurs when a sample or subset of the population is surveyed rather than the entire population. One measure of the likely difference resulting from not including all of the population in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the whole population had been included in the survey.

Estimates of job vacancies are seasonally adjusted to remove the estimated effects of normal seasonal variation from the series. The seasonally adjusted series are further smoothed to reduce the impact of irregular or non-seasonal factors. Smoothed seasonally adjusted series are called trend estimates. As data becomes available for the next quarter there are usually revisions in the trend estimates for the previous quarters.

The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the original estimates and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

## **COHERENCE**

The current job vacancies series, based on information obtained from a sample survey of employers on the ABS Business Register, was introduced in November 1983. Prior to November 1983 the job vacancies series was based on information obtained from a sample of businesses which submitted payroll tax returns. The survey was suspended for August 2008 to August 2009 (inclusive) and was re-instated for November 2009.

Data collection methodology have been improved over time, including survey definitions and

sample design. Seasonally adjusted estimates were introduced in 1984 and trend estimates were introduced in 1993.

The JVS uses Australian standard classifications to facilitate data comparability across statistical series. Industry data from November 2009 are classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0). Data for earlier series are classified to the 1993 edition of ANZSIC.

## INTERPRETABILITY

Job Vacancies, Australia (cat. no. 6354.0) contains Explanatory Notes, a Glossary and a Technical Note which provide further information about data sources, terminology and other technical aspects of the series.

## ACCESSIBILITY

Job Vacancies, Australia (cat. no. 6354.0) is available from the ABS web site.

If the information you require is not available as a standard product or service, then ABS Consultancy Services can help you with customised services to suit your needs. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

## Sampling Error (Technical Note)

### TECHNICAL NOTE SAMPLING ERROR

#### RELIABILITY OF ESTIMATES

**1** As the estimates in this publication are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called **sampling error**, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as non-sampling error and may occur in any enumeration whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

**2** The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the **standard error** which indicates the degree to which an estimate may vary from the value which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about 19 chances in 20 that the difference will be less than two standard errors.

**3** An example of the use of a standard error on levels is as follows. If the estimated number of job vacancies was 25,000 with a standard error of 2,500, then there would be about two chances in three that a full enumeration would have given an estimate in the range 22,500 to 27,500 and about 19 chances in 20 that it would be in the range 20,000 to 30,000.

**4** An example of the use of a standard error for a quarterly change estimate is as follows. If the estimated standard error for a quarterly change estimate of job vacancies was 1,000 and the quarterly change estimate between two quarters was 4,500, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +3,500 to +5,500 and about 19 chances in 20 that it would be in the range +2,500 to +6,500.

**5** Quarterly movements in estimates of job vacancies are considered to be statistically significant where they exceed two standard errors.

**6** Another measure of the sampling error (for level estimates only) is the **relative standard error**, which is obtained by expressing the standard error as a percentage of the estimate to which it refers. Level estimates with a relative standard error between 25% and 50%, denoted by an asterisk in this publication, are subject to sampling variability generally considered to be too high for most practical purposes and should be used with caution. Level estimates with a relative standard error of 50% or more, denoted by a double asterisk, are considered to be too unreliable for general use.

**7** The following table shows the standard errors for quarterly level and movement for States and territories by Sector, based on original data for the current quarter. The next table shows the standard errors for level estimates by industry.

#### STANDARD ERRORS, Job Vacancies, Sector - States and territories - August 2011

	LEVEL			QUARTERLY MOVEMENT		
	Private '000	Public '000	Total '000	Private '000	Public '000	Total '000
New South Wales	3.6	0.2	3.6	4.5	0.1	4.5
Victoria	4.2	0.2	4.2	4.8	0.4	4.9
Queensland	5.3	0.4	5.3	5.1	0.2	5.1
South Australia	1.0	0.1	1.0	1.6	-	1.6
Western Australia	3.3	0.3	3.2	3.0	0.2	3.0
Tasmania	0.4	-	0.4	0.3	-	0.3
Northern Territory	0.4	0.2	0.4	0.5	0.1	0.5
Australian Capital Territory	0.9	0.1	1.0	0.9	0.1	0.9
<b>Australia</b>	<b>8.6</b>	<b>0.6</b>	<b>8.6</b>	<b>10.0</b>	<b>0.5</b>	<b>10.1</b>

- nil or rounded to zero (including null cells)

#### Standard Errors, Job vacancies - Industry

	2010			2011		
	May '000	August '000	November '000	February '000	May '000	August '000
Mining	0.2	0.7	0.4	0.4	0.5	0.7
Manufacturing	1.6	2.3	2.0	1.7	1.6	2.4
Electricity, gas, water and waste services	-	-	-	0.1	-	-
Construction	2.6	2.6	1.9	3.0	2.9	3.9
Wholesale trade	3.0	2.5	1.9	2.7	3.4	2.8
Retail trade	3.0	2.9	3.3	1.4	1.7	2.1
Accommodation and food services	1.6	2.8	3.0	2.1	1.8	1.5
Transport, postal and warehousing	2.4	3.2	3.1	2.8	1.4	2.7
Information media and telecommunications	0.1	-	-	0.2	0.2	0.4
Financial and insurance services	1.7	1.8	0.7	1.5	0.9	0.7
Rental, hiring and real estate services	0.9	0.8	1.4	0.8	1.2	0.7
Professional, scientific and technical services	2.5	2.4	3.4	3.5	3.3	3.1

Administrative and support services	2.2	4.3	4.1	3.4	3.1	3.7
Public administration and safety	0.7	0.9	0.6	0.7	1.4	1.0
Education and training	1.4	0.3	0.5	1.2	0.1	0.7
Health care and social assistance	2.4	3.3	2.9	2.4	2.3	2.2
Arts and recreation services	0.6	0.3	1.3	0.7	0.3	0.2
Other services	1.7	1.2	2.3	1.4	1.3	1.7

- nil or rounded to zero (including null cells)

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